

UNIVERSITY OF QUEENSLAND

Computer Centre

NEWSLETTER

authorization: Director of the Computer Centre

1 SYSTEM PERFORMANCE

PERIOD FROM 29-MARCH to 11-APRIL

|             |         |      |
|-------------|---------|------|
| USEFUL TIME | 162 HRS | 85%  |
| GOOD TIME   | 164 HRS | 86%  |
| ON TIME     | 190 HRS | 100% |

|                      |            |
|----------------------|------------|
| NO OF CRASHES        | 1          |
| TIME BETWEEN CRASHES | 163.60 HRS |

2 NEW VERSION OF THE LINE PRINTER SPOOLER

On the 5th April 1974 version 5(231)-2 of the line printer spooler replaced version 4(140)-2. It has two minor changes as well as invisible changes, such as improvement in speed.

The visible changes are:

1. /PRINT:SUPPRESSED now does not suppress tabs, but only the vertical control characters.
2. /HEAD:Ø or /NOHEADER is not required with /FORMS:LABELS switch.

When printing labels the job header is reduced to a one label name band and file headers are suppressed.

### 3 USE OF MAGNETIC TAPES AND DISK PACKS ON THE PDP-10

A significant number of users are now using these special facilities and the following notes should help in planning work with them.

The Centre presently only has two magnetic tape drives, one of which is substantially committed to system functions. Procurement of additional drives is being actively pursued but it will be some time before they are available. At present only one disk drive is available for the mounting of private packs but shortly a planned rearrangement of drive allocation will make an additional unit available. Obviously, as usage increases, there will be competition for these limited resources.

So that you can plan your activities in advance, and to give us help in our operational planning, we will accept advance bookings of device hire on the conditions listed below:

- Preference will be given to booked requests for the use of a device.
- In the case of system failure or system problems, the availability of the device cannot be guaranteed and in some circumstances it may be necessary to terminate a booking prematurely.
- Where a booking cannot be satisfied because of system problems, it may not be able to reinstate the request immediately the system becomes available. Every attempt will be made to help the user in such circumstances but it may be necessary to postpone the request to another day.
- It may<sup>not</sup> be possible to ensure the availability of a drive at the nominal start time of the hire period but it will be made available as soon as practicable after then.
- A booking may not be accepted if insufficient notice is given.
- The Centre reserves the right to charge a user who makes a booking but does not use the device during the booked time.

At present, users should not have problems in securing the use of a single device without booking. A quick check on the availability of a device can be made with the RESOURCE command and, if not available, the PLEASE command or the telephone extension 188 can be used to elicit further information.

To avoid confusion, where privately owned magnetic tapes are used on the PDP-10, these tapes will have to be registered at the Computer Centre and assigned an internal tape number. This must be used with any mount requests for this tape.

#### 4 BMD STATISTICAL PROGRAMS

The following BMD statistical programs are available to PDP-10 users. Those marked with an asterisk have already been implemented and are available on the STATS directory as core image files with the exception of BMD 07R which is required to be loaded with a user program and so exists as a .REL file.

Users wishing to use any of the programs not currently implemented, should contact Bob Christiansen - extension 6288.

##### CLASS D - DESCRIPTION AND TABULATION

- \* 1D Simple Data Description
- \* 2D Correlation with Transgeneration
- \* 3D Correlation with Item Deletion
- 4D Alphanumeric Frequency Count
- 5D General Plot including Histogram
- 6D Description of Strata
- 7D Description of Strata with Histograms
- \* 8D Cross-tabulation with Variable Stacking
- 9D Cross-tabulation, Incomplete Data
- 10D Data Patterns for Dichotomies
- 11D Data Patterns for Polychotomies
- 12D Asymmetric Correlation with Missing Data
- 13D t Program

##### CLASS M - MULTIVARIATE ANALYSIS

- \* 1M Principal Component Analysis
- \* 2M Regression on Principal Components
- \* 4M Discriminant Analysis for Two Groups
- 5M Discriminant Analysis for Several Groups
- \* 7M Stepwise Discriminant Analysis
- \* 8M Factor Analysis
- 9M Canonical Correlation Analysis
- 10M Identification of Outliers

CLASS R - REGRESSION ANALYSIS

- 1R Simple Linear Regression
- \* 2R Stepwise Regression
- 3R Multiple Regression with Case Combinations
- 4R Periodic Regression with Harmonic Analysis
- 5R Polynomial Regression
- \* 6R Asymptotic Regression
- \* 7R Nonlinear Least Squares

CLASS S - SPECIAL PROGRAMS

- 1S Life Table and Survival Rate
- 2S Contingency Table Analysis
- 3S Biological Assay: Probit Analysis
- 9S Transgeneration
- 10S Transposition of Large Matrices
- 11S Life Table and Survival Rate (No.2)
- 12S Open-ended Transgeneration
- 13S Multipass Transgeneration
- 14S Generalized Sorting Routine

CLASS T - TIME SERIES ANALYSIS

- 2T Autocovariance and Power Spectral Analysis
- 3T Time Series Spectrum Estimation
- 4T Multiple Time Series Spectral Analysis
- 5T Time-locked Averaging

CLASS V - VARIANCE ANALYSIS

- \* 1V Analysis of Variance for One-way Design
- 2V Analysis of Variance for Factorial Design
- \* 3V Analysis of Covariance for Factorial Design
- \* 4V Analysis of Covariance with Multiple Covariates
- 5V General Linear Hypothesis
- 6V General Linear Hypothesis with Contrasts
- 7V Multiple Range Tests
- 8V Analysis of Variance
- 9V Analysis of Covariance
- 10V General Linear Hypothesis (No.2)
- 11V Multivariate General Linear Hypothesis
- \* 12V Multivariate Analysis of Variance and Covariance

Small changes have been made to the input/output routines for BMDØ8M and BMDØ3V and these have the following implications to users:

1. Device DSK is used for alternate input and output and users may specify on the program control cards any of the units 22,23,24. Disk units 1,20,21 are unavailable since they are used to read and write intermediate results.
2. For batch jobs, input/output is to units 2 and 3 respectively (card reader/line printer) and for terminal controlled jobs to units 5 and 6 respectively. Terminal users wishing to receive output at their terminal should use the command  
.ASSIGN TTY:6 before running the program. The command  
.ASSIGN LPT:6 could be used if output from the line printer is desired.
3. For the purpose of storing intermediate results, the programs may create disk files FORØ1.DAT, FOR2Ø.DAT, FOR21.DAT. Users should ensure they have no wanted files with these names on their disk area.

Sample batch card deck setup:

```
$JOB
$DECK DAT.CDR
.   data
.
$EOD
.SET CDR DAT
.R STATS:BMDØ3V
.DELETE FORØ1.DAT, FOR2Ø.DAT, FOR21.DAT, DAT.CDR
end-of-file card
```

## 5 PROCEDURE FOR PRINTING LABELS ON THE PDP-10

The address labels presently available for use on the PDP-10 have 4 lines of 45 characters. The vertical format loop used with these labels is such that a form feed slews to the top line of a label. If the address file is produced by a FORTRAN program the first line should have a '1' in column one and a blank in column one for the other lines.

In COBOL, write the first line after advancing top-of-form (channel(1)). With TECO, form feeds can be inserted directly or by the command '12I\$'. With EDIT, it is convenient to imitate the fortran method (i.e. a '1' in column one) and give the file a '.DAT' extension or print with '/FILE:FORTTRAN' switch.

Examples of print commands:

```
.PRINT MYLAB.DAT /FORMS:LABELS /COPIES:20 /PRIORITY:4
```

```
.PRINT STUDNT.LAB /FORMS:LABELS /COPIES:100 /FILE:FORTTRAN
```

It is no longer necessary to use '/NOHEADER' switch since 'LABELS' implies vestigial job header and trailer pages, of one label each, and no file headers.